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09/404,704	09/23/1999	TOMOAKI HOKAO	12994	8700

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EXAMINER

NGUYEN, DUNG X

ART UNIT	PAPER NUMBER
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2631

DATE MAILED: 06/28/2004

13

Please find below and/or attached an Office communication concerning this application or proceeding.

9

Office Action Summary

Application No.

09/404,704

Applicant(s)

HOKAO, TOMOAKI

Examiner

Dung X Nguyen

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2 - 35, 37 - 55, 57, 59 - 62, and 64 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2 - 8, 35, 37 - 43, 62, and 64 is/are allowed.
- 6) ☒ Claim(s) 9, 10, 15, 16, 23, 24, 32 - 34, 44 - 49, and 55 is/are rejected.
- 7) ☒ Claim(s) 11 - 14, 17 - 22, 25 - 31, 35, 50 - 54, 57, and 59 - 61 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

Response to Arguments

1. Applicant's arguments filed on March 11, 2004 have been considered but are moot in view of the new ground(s) of rejection. Claims 1, 36, 56, 58, and 63 have been canceled.

Claim Objections

2. Claim 54 is objected to because of the following informalities: on line 2, "tines" should be changed to "times". Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 9, 15, 32, and 33 are rejected** under 35 U.S.C. 103(a) as being unpatentable over Honda (US patent # 5,970,084), in view of Keskitalo et al. (US patent # 6,091,788).

Regarding claim 9, Honda discloses (figure 1 and column 5, line 20 to column 6, line 2):

- Antenna (1) and high-frequency circuitry (2) corresponding to a radio unit for receiving a signal;
- Fingers receivers (blocks 4, 9, 14) for inversely diffusing the data received by the antenna (1) and the high-frequency circuit (2) in association with respective multiple paths;
- Synthesizer (20) for synthesizing signals inversely diffused by the finger receivers;
- Detector (21) provides detecting means for detecting an error output of the synthesizer (20);

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- Control (22) for controlling the plurality of the finger receivers based on the detecting means (column 5, lines 32 – 33).

Honda differs from the instant claimed invention that it does not show the detecting means for detecting whether there is a speech signal or not based on the data inversely diffused by the finger receivers.

While Keskitalo et al. teaches (figure 6a):

- Receivers 600, 602, 604 (column 10, lines 22 – 35) for providing means of detecting and searching useful signal components and giving their parameters (column 10, lines 42 – 43);
- Controller (612) for controlling receivers (600, 602, 604) based on the detected result (column 10, lines 44 – 51).

Based on the preceding information, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to implement Keskitalo et al. to provide the step of detecting whether there is a speech signal or not based on the data inversely diffused by the finger receivers for detailing more useful information.

Finally, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine Honda and Keskitalo et al. for saving the power consumption.

Regarding claim 15, as followed by the limitations analyzed in claim 9, Honda and Keskitalo et al. differs from the invention that they do not show wherein the detecting means comprises a plurality of detecting means associated with the plurality of finger receivers, respectively.

However, to make a multiplicand of detecting means associated with the plurality of finger receivers is on the hand of one in ordinary skill in the art.

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Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine Honda and Keskitalo et al. for saving the power consumption.

Regarding claim 32, as followed by the limitations analyzed in claim 9, Honda further discloses its invention is used for a mobile communication receiver (abstract).

Regarding claim 33, as followed by the limitations analyzed in claim 15, Honda further discloses its invention is used for a mobile communication receiver (abstract).

4. **Claims 10 and 16 are rejected** under 35 U.S.C. 103(a) as being unpatentable over Honda (US patent # 5,970,084), Keskitalo et al. (US patent # 6,091,788), further in view of Miller (US patent # 5,608,722).

Regarding claim 10, Honda and Keskitalo et al. differs from the invention that they do not show wherein the control means comprises means for operating all the finger receivers if a speech signal is detected by the detecting means.

However, Miller discloses (figure 2) that controller (78) for controlling all receivers (62, 72) being operated if a voice signal is detected (column 16, lines 36 – 48).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine Honda, Keskitalo et al., and Miller for improving the communication system.

Regarding claim 16, as followed by the limitations analyzed in claim 10, Honda, Keskitalo et al., and Miller differs from the invention that they do not show wherein the detecting means comprises a plurality of detecting means associated with the plurality of finger receivers, respectively.

However, to make a multiplicand of detecting means associated with the plurality of finger receivers is on the hand of one in ordinary skill in the art.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to implement Honda, Keskitalo et al., Miller to provide wherein the detecting means comprises a plurality of detecting means associated with the plurality of finger receivers, respectively, for saving the power consumption.

5. **Claims 23 and 34 are rejected** under 35 U.S.C. 103(a) as being unpatentable over Honda (US patent # 5,970,084), Keskitalo et al. (US patent # 6,091,788), further in view of Mimura (US patent # 6,021,123).

Regarding claim 23, the limitations are analyzed in the same manner set forth as claim 9, plus, Honda and Keskitalo et al. differs from the invention that they do not show the step of a decoder for decoding the data synthesized by the synthesizer.

However, Mimura teaches (figure 2) that Viterbi decoder (30) for decoding the data synthesized by the synthesizer (28) via de-interleave circuit (29) (column 7, lines 21 – 30).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine Honda, Keskitalo et al., and Mimura so as to ensure the desired control means based on the detecting means that based on the decoding results for saving the power consumption.

Regarding claim 34, as followed by the limitations analyzed in claim 23, Honda further discloses its invention is used for a mobile communication receiver (abstract).

6. **Claim 24 is rejected** under 35 U.S.C. 103(a) as being unpatentable over Honda (US patent # 5,970,084), Keskitalo et al. (US patent # 6,091,788), Mimura (US patent # 6,021,123), further in view of Miller (US patent # 5,608,722).

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Regarding claim 24, as followed by the limitations analyzed in claim 23, Honda, Keskitalo et al., and Mimura differs from the invention that they do not show wherein the control means comprises means for operating all the finger receivers if a speech signal is detected by the detecting means.

However, Miller discloses (figure 2) that controller (78) for controlling all receivers (62, 72) being operated if a voice signal is detected (column 16, lines 36 – 48).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine Honda, Keskitalo et al., Mimura, and Miller for improving the communication system.

7. **Claims 44 and 46 are rejected** under 35 U.S.C. 103(a) as being unpatentable over Keskitalo et al. (US patent # 6,091,788).

Regarding claim 44, Keskitalo et al. discloses (figure 6a):

- Receivers 600, 602, 604 (column 10, lines 22 – 35) for providing means of detecting and searching useful signal components and giving their parameters (column 10, lines 42 – 43);
- Controller 612 for controlling receivers 600, 602, 604 based on the detected result (column 10, lines 44 – 51).

Keskitalo et al. differs from the instant claimed invention that it does not show the step of detecting whether there is a speech signal or not based on the decoded data for detailing the useful data.

However, based on the preceding information of Keskitalo et al., it would have been obvious to one of ordinary skill in the art at the time of the invention was made to implement Keskitalo et al. to show the step of detecting whether there is a speech signal or not based on the decoded data for detailing the useful data, and of course, all times.

Regarding claim 46, the limitations are analyzed in the same manner set forth as claim 44.

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7. **Claims 45, 47 – 49, and 55 are rejected** under 35 U.S.C. 103(a) as being unpatentable over Keskitalo et al. (US patent # 6,091,788), in view of Miller (US patent # 5,608,722).

Regarding claim 45, as followed by the limitations analyzed in claim 44, Keskitalo et al. differs from the instant claimed invention that it does not show the step of wherein all of the receivers are operated if a speech signal is detected.

While, Miller discloses that all receivers are operated if a voice signal is detected (column 16, lines 36 – 48).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine Keskitalo et al. and Miller to fulfill the limitations of the instant claimed invention for improving the communication system.

Regarding claim 47, the limitations are analyzed in the same manner set forth as claim 45.

Regarding claim 48, as followed by the limitations analyzed in claim 44, Keskitalo et al. differs from the instant claimed invention that it does not show the step of wherein at least two of the receivers are operated if a speech signal is detected.

While, Miller discloses that all receivers are operated if a voice signal is detected (column 16, lines 36 – 48). Based on that information, one is able to provide exact two receivers are operated if voice signal is detected.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine Keskitalo et al. and Miller to fulfill the limitations of the instant claimed invention for improving the communication system.

Regarding claim 49, the limitations are analyzed in the same manner set forth as claim 48.

Regarding claim 55, the limitations are analyzed in the same manner set forth as claim 45.

Allowable Subject Matter

8. **Claims 11 – 14, 17 – 22, 25 – 31, 35, 50 – 54, and 57, 59 - 61 are objected** to as being dependent upon a rejected base claim or minor informalities, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. **Claims 2 – 8, 37 – 43, 62, and 64 are allowed.** The following is a statement of reasons for the indication of allowable subject matter:

Regarding to the claimed invention, the prior art of record fails to show or render obvious of a receiving circuit, which substantially is capable of reducing a consumed current when received data contains no speech signal comprising an antenna and a radio unit for receiving a signal via a radio link, a plurality of finger receivers for inversely diffusing the signal received by antenna and the radio unit in association with respective multiple paths, a synthesizer for synthesizing signals inversely diffused by the finger receivers, and means for controlling the number of finger receivers, based on whether a speech signal or data containing in the signal received by antenna and radio unit. If the speech signal is detected then the controller controls all the receivers to operate, if no speech signal is detected, then the controller controls only one or two of the finger receivers to operate based on other factors such as supply of a clock, number of base stations, soft hand-over mode.

Contact Information

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dung X. Nguyen whose telephone number is (703) 305-4892. The examiner can normally be reached on Monday through Friday from 8:30 AM to 5:30 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Ghayour Mohammad H. can be reached on (703) 306-3034. The fax number for this group is (703) 872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

DXN

June 01, 2004


JEAN B. CORRIELUS
PRIMARY EXAMINER

6/24/04